

[illegible]

[illegible]

[illegible]

Figure 2

*torA/Shewanella C*

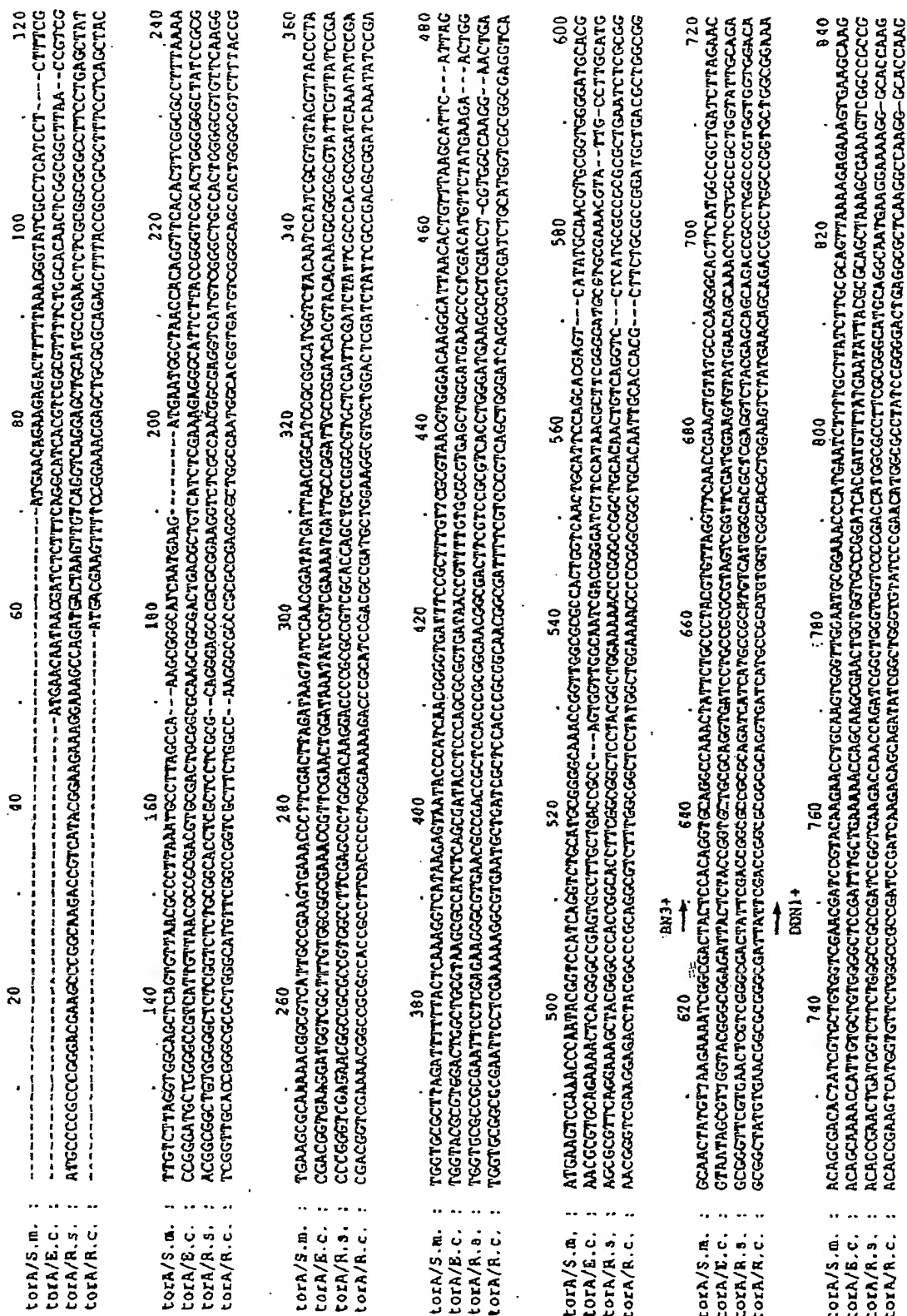
ATGAACAGAAGAGACTTTTTAAAGGGTATCGCCTCATCCTCTTTCGTTGTCTTAGGTGGCAG  
CTCAGTGTTAGCGCCCTTAAATGCCTTAGCCAAAACGGGCATCAATGAAGACGAATGGCTAA  
CCACAGGTTTACACTTCGGCGCCTTTAAATGAAGCGCAAAAACGGCGTCATTGCCGAAGTG  
AAACCCCTTCGACTTAGATAAGTATCCAACGGATATGATTAACGGCATCCGCGACATGGTCTA  
CAATCCATCGCGTGTACGTTACCCTATGGTGCGCTTAGATTTTTTACTCAAAGGTCATAAGA  
GTAATACCCATCAACGGGGTGATTTCCGCTTTGTTTCGTGTAACATGGGACAAGGCATTAACA  
CTGTTTAAGCATTTCATTAGATGAAGTCCAAACCCAATACGGTCCATCAGGTCTGCATGCGGG  
TCAAACCTGGTTGGCGCGCCACGGGTCAACTGCATTCCAGCACGAGTCATATGCAACGTGCGG  
TGGGGATGCACGGCAACTATGTGAAGAAAATCGGGCGACTACTCCACAGGTCAGGCCCAAACA  
ATTCTGCCCTACGTGTTAGGTTCAACCGAAGTGATGCCCAAGGCACCTTCATGGCCGCTGAT  
CTTAGAACACAGCGACACTATCGTGCTCTGGTTCGAACGATCCGTACAAGAACCTGCAAGTGG  
GTTGGAATGCGGAAACCCATGAATCTTTTGCTTATCTTGCGCAGTTAAAGAGAAAGTGAAG  
CAAGGCAAGATCCGTGTTATCAGTATCGACCCTGTGGTGACTAAGACCCAAGCCTATTTGGG  
CTGTGAGCAACTCTACGTTAACCACAGACAGACGTGACTTTAATGCTGGCCATCGCCACG  
AGATGATCAGCAAAAAGCTCTACGACGATAAATTTATCCAAGGCTACAGCTTAGGTTTTGAA  
GAGTTTGTGCCCTATGTGATGGGTACTAAAGATGGCGTAGCCAAAACCCAGAATGGGCCGC  
GCCTATCTGTGGTGTGAAGCCCATGTTATCCGCGACTTGGCTAAAACCTTAGTCAAGGGCC  
GCACTCAGTTCATGATGGGCTGGTGTATCCAGCGCCAGCAACACGGGGAACAACCCTATTGG  
ATGGCGGCGGTACTGGCGACCATGATCGGCCAAATCGGTCTACCCGGTGGTGGCATCAGTTA  
TGGTCACCACTACTCGAGTATCGGCGTGCTTCATCGGGTGCCGCGGCGCCAGGTGCTTTCC  
CCGTAACCTTGGAACGAAAATCAAAAGCCACTATTTGATAGCTCAGACTTCAAGGGCGCGAGC  
AGCACAAATCCGGTTGCCCGCTGGATTGATGCGATTCTCGAACCTGGTAAAACCATTTGATGC  
TAACGGCTCGAAAGTGGTTTATCCCGATATCAAGATGATGATTTTCTCGGGTAATAATCCTT  
GGAACCTCACCAAGACAGAAACCGTATGAAGCAAGCCTTCCATAAGCTTGAGTGTGTGGTC  
ACTGTTGATGTGAACGGACGGCAACTTGCCGCTTCTCGGATATCGTACTACCCGCTTGTTAC  
TACCTATGAGCGCAACGATATCGACGTTTACGGCGCCTATGCTAACCGCGGTATTTTAGCCA  
TGCAGAAAATGGTTGAGCCACTGTTTGATAGCTTGTCGGATTTTGAAATTTTCACTCGCTTT  
GCCGCCGTACTTGGTAAAGAGAAAGAATAACCCGTAACATGGGCGAAATGGAGTGGCTAGA  
AACCCTCTATAACGAATGTAAAGCCGCCAACGCGGGCAAGTTTGAGATGCCTGACTTTGCGA  
CTTTCTGGAAACAAGGTTATGTGCATTTTGGTGACGGTGAACCTCTGGACGCGCCATGCAGAC  
TTTAGAAACGATCCTGAAATCAATCCACTAGGCACGCCTTCAGGTTTGATTGAAATCTTTAG  
CCGTAAGATTGATCAATTCGGTTACGATGACTGTAAAGGTCACCCAACTTGGATGGAGAAAA  
CCGAGCGTAGCCATGGCGGCCCTGGTTCTGACAAGCATCCGATTTGGTTGCAGTCATGCCAC  
CCAGACAAACGCTTACACTCGCAAATGTGTGAGTCGCGAGAATAACGCGAGACCTACGCAGT  
CAATGGCCGTGAGCCTGTGTATATCAGCCCTGTGACGCAAAAGCGCGCGGCATAAAAGATG  
GCGATATAGTGCGAGTCTTTAACGACCGTGGCCAACTGTGCGGGTGCAGTGGTATCGGAC  
AACTTCCCTACTGGTATTGTGCGGATTACGAAGGCGCATGGTATGGGCCAGTAGGTAAAGA  
TGGTAGCACTGAAGGTGGGGCTGAAGTCGGCGCCCTGTGCAGTTATGGCGATCCTAACACCC  
TCACTTTAGACATAGGCACATCTAAACTTGCCCAAGCTTGCTCAGCCTATACTTGCTTAGTC  
GAGTTTGAGAAATAACCAAGGCAAAGTGCCTAAGGTCAGCTCCTTCGATGGCCCTATCGAAGT  
CGAAATC

Figure 3

*Photobacterium phosphoreum*

5'ACAATACTGAAAGATTGTAAGACATTGATATGGTGGTCAAATGATCCGATT  
AAAAACAGTCAGGTTGGCTGGCAGTGTGAGACTCATGGTTCTTATGAGTATTA  
TGCGCAATTAAAGCAGAAGGTCGCAGATGGTGGGATCCGTATGATCTCGGTCTG  
ATCCTGTAGTGTGCGAAATCGCAAAAATATTTTAACTGTGAGCACCAATACGTC  
AATCCTCAAACCTGACGTTCCCTTTCATGCTTGCTATTGCGCATACATTGTATAA  
AGAAGATCTGTACGATAAACAATTTCTGGAAACTTACACTTTAGGCTTCAATG  
AATTCTTGCCCTTACTTATTGGGTACAGGCAAAGATAAAATAGCCAAAACGCCA  
GAATGGGCAGAGCCAATTTGTGGCGTTAAAGCAGAGGCTATTCGAGAATTTGC  
TCGCGGATTAGTTAAAAACCGTACGATGATAATGTTTGGTTGGGCTGTACAGC  
GTCAACAACACGGTGAGCAGCCTTATTGGATGGGAGCAGTGCTGGCTTCGATG  
TTAGGCCAAATAGGCTTACCTGGTGGAGGGATTTCCTATTCTCACTTTTACAG  
TGGCGTTGGGTTACCTTTCAGTACTGCAGCTGGGCCGGGGGGGATTTCCGCGTA  
ATGTTGATGAAGGCCAACAGCCGATTTGGAATAATAACGATTTTAAAGGCTAC  
AGTTCGACAATTCCGGTCGCAAGATGGATTGATGCGATCATGGAACCAGGTAA  
AAAAATTCAATATAACGGCGCTAATGTGGTGTTCCTGATATTAAGATGATGG  
TCTTTAGTGGTTGTAATCCGTGGAATCATCATCAACAACGTAATCGTATGAAA  
CAAGCATTTAGAAAGCTGCAAACCGTGGTTAATATTGATTATACATGGACACC  
AACCTGTCGTTTTTCCGATATTGTATTACCTGCTTGTACCCAATTTGAGCGTA  
GTGATTTAGATCAATATGGTACTTATTCAACTAGCGGTATTTTAGCGATGCAT  
AAGCTAATTGATCCGCTTTATCAATCAAAAACAGACTTTCAGATATTTACTGA  
ATTAACCGAACGCTTTGGGAAA 3'

### Figure 4



[illegible]

**Figure 4 (cont. 2)**

toR/A/S.m. : 1700 1720 1740 1760 1780 1800  
toR/A/E.c. : TACGGCCCTTTGCTAAACCGGGTATTTTACGCTGACGAAATATGGTTGACCCACTGTGTTGATAGCTTGTTCGATTTTGAATTTTCA--CTCCGTTTGGCCGCCGTACTCGGCAAGAGAA  
toR/A/R.s. : TACGGCAATCACTCAACCGGTGGCATTTATGCCCATGACAAAGGTGTGGTCCCGCGGCTTCAAGGCGGCGAGCACTTCCATATTTTCCGCGACCTGTGCGCTCTCTTAAATCCG--GAAGA  
toR/A/R.c. : GTGGCGACTTTTTCGAACCTCCGCGCATCTCTCGCATGAAGAGGTGTGGTCCGCTTACAGAGCCCGGTTCGATCGACATCTTTCGAGCCCTTG--ACGAGAGGCTCTGGGCAAGGCGCA  
toR/A/R.c. : ATCGGGATTTATTTGGAACACCGCGCATCTCTGGCATGTGAAGAGATGCTCGAGCCGCTTTACGAGCCGCGCATATACGACATCTTTCGCGCCGCTC--GCCCAACGCGCTGGGCGACAGGCGCA

toR/A/S.m. : 1820 1840 1860 1880 1900 1920  
toR/A/E.c. : AGAATPACACCGCTAAACATGGCGCAATTTGAGTGGTTAGAAACCCCTCTATACGAA--TGTAAAGCC--CCCAACCGGGGCAACTTTGAGATGCGCTG--ACTTTGCGACTTTCTGCAAAACA--  
toR/A/R.s. : AGCCTTTACCGAAGGCTGGACCAATGGGTGTGTGAACGCTCTGTGAGACGCTCTGTGAGAGGTGTACAGCAAGCAAGGCAACGCGGTTCATCTGCCAG--GTTTGTGATGACTTTCTTGGATTAAC--  
toR/A/R.c. : GGAATTCACCGAAGGCGCGACGAGATGGCTGCATCGATCGCTTCTACGAGCGGGCTGTACAGAGCCCGATTCAGAGAGATGAGATGCGCT--GTTTTCGAGGACTTCTGTGTGGGAG  
toR/A/R.c. : GGAATTCACCGAAGGCAAGACGAGATGGGCTGAGTCAAGTCTCTACGAGCGATGCGCCCAAGAGGCAAGG---CGGGGTTCGAGATGCGCCCGCTTCGAAGCCCTTCTGTGGCGGAG

toR/A/S.m. : 2060 2080 2100 2120 2140 2160  
toR/A/E.c. : AGAATTGATCAATTCGGTTACGATGACTGACTGTAAAGGTTCAACCACAGCTGGATGGAGAAACCGAGGCTAGTCAATGCGCGCCCTGGCTTGACAAACATCTCGATTTGCTGACAGTCATGCGCATC  
toR/A/R.s. : CTATCCCGCATATGACATACGACGATGTGTGAGGGAATCCAGATGTGTTTGAAGAAATGCAACGCTCCACGCTGGCTTGGCTCGCAAGATATCGATTTGCTGACAGTCATGCGCATC  
toR/A/R.s. : ACATCGAAGAGTGGGCTATGACATTCGCGGCCATCCCACTCGATGCAATGCAATGCAACGCTCCGCGCGAGGCT---CTCGGGGGCGCGCGGCG---AAATATCCGCTCCATGTGTGGCGAGCCAC  
toR/A/R.c. : ACATCGAAGAGATGGGCTATGACGACTGCGCGCGCATCCGACCTGGATGGAAACCGGTTTGAACGG---CTCGAGAGCGCGCGGGCG---AAATATCCGCTTCACATCTGCGGCTCGC--ACC

toR/A/S.m. : 2180 2200 2220 2240 2260 2280  
toR/A/E.c. : CAGACAACCTTTACACTCCGACATGT-----G-TGAGTCCGAG--AATACCGGAGACTTACCAGTCAATGCGCTGATATATACGCTTGTATATACGCTTGTGACGCTTGTGACGACGCAAGACGCTGG  
toR/A/R.s. : CGAATTTCCGACTTCACTTCGAGTTAT-----G-TGAGTCCGAA--GGTGTGTGACGATTAACGTTAGGTTAGGAGCCAGTATTCATTTAAACCGCGGATTAACGACGCAAGACGCTGG  
toR/A/R.s. : CGAATCGCGCTTCACTTCGAGTTAT-----G-TGAGTCCGAA--GGTGTGTGACGATTAACGTTAGGTTAGGAGCCAGTATTCATTTAAACCGCGGATTAACGACGCAAGACGCTGG  
toR/A/R.c. : COTTCNAACGG--TGTTACTCGACACCGTTACCGCGCTGCTCCGCGAGAGGCTATGCGGTGAGAGGAGAGGCTTACGCTGAGAGGAGAGGCTCTGCTCCGCTCCGACGCTCCGCGCGCGCGCGCG

toR/A/S.m. : 2300 2320 2340 2360 2380 2400  
toR/A/E.c. : CATCAAGATGGGCAATAGTTCGAGCTTTTAAAGGCGCTTGGCCAACTGTTGCGGGTGTGTGTATCGGACACTTTCCTTAAAGGGATTTGTGCAATTCACGAGCGCGCTGTGATG  
toR/A/R.s. : TATTCGTAAAGGTGATGTGATCGCTTTTAAAGCTCGCGTCAAGTGTGATGAGAGGAGGAGTGTGTTTGAACGCTATGCAACCTCCGCGTGGGCAAGATTCGCAAGGGGCAATGCTACGA  
toR/A/R.s. : CATTCGGACGCGCATGTGCTCGGTTTCAACGACCGCGGACGATCTCTGTGGGCGGAGGTGAGGACAGCGGTGTATGCGCGCGGCGGCTCAAGCTTCAAGCTTACGAGGCGGCTGTGATG  
toR/A/R.c. : CATCGCCGATGGGAGTGTGTGCGGTGTGACAAATGTCGCGTCAAGTCTGACGCGGCTCAAGCTGACGATGAGGGGGTAAATCCAGATCTTACGAATCTTACGAAGGGGCTGTGATG

toR/A/S.m. : 2420 2440 2460 2480 2500 2520  
toR/A/E.c. : GCCAGTNGSTAAAGATGGTAGCACTGAGGTGTGCTGAAAGTCCGGCGCCTCTGTAGTTATTGGCATCTTAACGCGCTCACTTTAGCAGTATGCGACACTCTTAACTTGCCCAAGCTTGTCTC  
toR/A/R.s. : TCCAG--ATAA--G-----GCGGAGCTGGTCTGCGTGTCAATACGCTTACGACATCGACATGAGCTGTGAGTACATTCGACGCTTGGGCGGCGGCAATGCTACGA  
toR/A/R.s. : CCGCTTCGAC--C-----G-----GCTCGGAGGAGGCGGAGCTGTGACAAATACGCGGAGCGTGAACGCTGTCTGCTCGAGCTGCGGACCTCGCAAGCTTGGGCGAGGCGGAGCTG  
toR/A/R.c. : TCCCTCGGHC--G-----TCAACCGAGCGCGGCGGCTGACGAGCTTCAAGCTGCTGCGCGGAGCTTAACTGCTGCGCGGATATCGGCGATGTGCAAAATGCGCGGAGGCGGAGCTG

Figure 4 (cont. 3)

	2540	2560	2580	2600	2620	2640
LoiA/S.m. :	AGCCTATACTTGCCTTACGTCGAGTTTCAAAATACCAAGGCGAAGTGTGCTTAAGGTACACTCCTTCGATGSCCCCGATCGAAGTCGAAATC					
LoiA/E.c. :	TGCGCACACTACGCTGCTGGTGGAAATTTCAGAGAGTACAGCGGAACACTGCGAGAGGTGACGGCGTTTAA CGGCCCGCTGGAGATGCTGCGCGCATGCGCAGGTGAA					
LoiA/R.s. :	CGGCCAGACCATCCTTCGCGGATGTCGAAATATGCGGGCGCGCCGCTGACCGGTGACCGTGTGACACAGCCCGAAGGACCC					
LoiA/R.c. :	TGGTCAGACCGTCTGCGCGAGGTCCAGAAATATACCGGCCCGCCCGCTACCTTGAACGGCTTTGGTCCCGCGAAGGCGCTCGNA					
LoiA/S.m. :	----					
LoiA/E.c. :	ATCA					
LoiA/R.s. :	----					
LoiA/R.c. :	----					

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Figure 5

*Salmonella typhimurium*

5' ATGAAACAGGTGGTGTCTGCCGCGAGTTTGAAGCGCGTAACGACTTTGATATT  
TTCCGCGATCTCTGCCGACGCTTTAACCGTGAAGCGGCATTACGGAAGGTCT  
TGATGAAATGGGCTGGCTGAAACGCATCTGGCAGGAAGGGAGCCAGCAGGGAA  
AAGGTCGCGGTATCCACTTACCGATTTTCGAGGTGTTCTGGAATCAACAGGAG  
TACATCGAGTTTGATCATCCGCAGATGTTTGTACGCCATCAGGCTTTCCGTGA  
AGATCCGGACCTGGAGCCGTTGGGCACGCCAAGCGGTTTGATCGAGATTTACT  
CCAAAACCATCGCCGACATGCAATACGACGATGGTCAGGGCCATCCCATGTGG  
TTCGAAAAAATCGAACGCTCGCATGGCGGGCCGGGATCGCAGCGCTGGCCGCT  
GCACTTACAATCCGTCCACCCTGATTTCCGTCTGCATTCCCAACTGTTGCGAG  
TC 3'

Figure 6

*TorA/Shewanella C*

MNRRDFLKGIASSSFVVLGGSSVLAPLNALAKTGINEDEWLTTGSHFGAFKMK  
RKNGVIAEVKPFDLDKYPTDMINGIRDMVYNPSRVRYPMVRLDFLLKGHSNT  
HQRGDERFVRVTWDKALTLEKHSLEDEVQTOYGPSGLHAGQTGWRATGQLHSST  
SHMQRAVGMHGNVVKIGDYSTGAGQITLPYVLGSTEYVAQGTSNPLILEHSD  
TIVLWSNDPYKNLQVGWNAETHESFAYLAQLKEKVKQGKIRVISIDPVVTKTQ  
AYLGCEQLYVNPQTDVTLMLAIAHEMISKLYDDKFIQGYSLGFEEFVFPYVMG  
TKDGVAKTPEWAAPICGVEAHVIRDLAKTLVKGRTOEMMGWCIQRQOHGEQPY  
WMAAVLATMIGQIGLPGGGTSYGHYSSIGVPSSGAAAPGAFFPRNLDENQKPL  
FDSSDFKASSTIPVARWIDAILEPGKTIIDANGSKVVYPDIKMMIFSGNNPWN  
HHQDRNRMKQAFHKLECVVTVDVNWTATCRFSDIVLPACTTYERNIDIDVYGAY  
ANRGILAMQKMVEPLFDSLSDFEIFTRFAAVLGKEKEYTRNMGEMEWLETLYN  
ECKAANAGKFEMPDEFATFWKQGYVHFGDGELWTRHADFRNDPEINPLGTPSGL  
IEIFSRKIDQFGYDDCKGHPTWMEKTERSHGGPGSDKHPIWLQSCHPDKRLHS  
QMCEGREYRETYAVNGREFVYISPVDKARGIKDGDIVRVFNDRGQLLAGAVV  
SDNFPTGIVRIHEGAWYGPVGKDGSTEGGAEVGALCSYGDPNTLTLDIGTSKL  
AQACSAYTCLVEFEKYQGVKPKVSSFDGPIEVEI

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Figure 7

TorA/P.p. : TILKDCKTLIWWSNDPIKNSQVGWQCETHGSYEYYAQLKQKVA  
 TorA/S.m. : GTSWPLILEHSDTIVLWSNDPYKNLQVGWNAETHESFAYLAQLKEKVK  
 TorA/E.c. : QTSWPLVLQNSKTIVLWGSDDLKNQANWWCPDHDVYEYYAQLKRKSA  
 DorA/R.s. : QTAWPVVVENTDLMVFWAADPMKTNEIGWVIPDHGAYAGMKALKEK--

TorA/P.p. : DGGIRMISVDFVVSQSQKYFN---CEHQYVNPQTDVFPMLAIAHTLYKED  
 TorA/S.m. : QGKIRVISIDPVVTKTQAYLG---CEQLYVNPQTDVTLMLAIAHEMISKK  
 TorA/E.c. : AGEIEVISIDPVVTSTHEYLGGEHVKHIAVNPQTDVPLQLALAHTLYSEN  
 DorA/R.s. : -G-TRVICINPVRTETADYFG---ADVVSPPQTDVALMLGMARTLYSED

TorA/P.p. : LYDKQFLETYTLGFNEFLPYLLGTGDKIAKTPEWAEPICGVKAEAIREF  
 TorA/S.m. : LYDDKFIQGYSLGFEEFVPYVMGT-KDGVAKTPEWAAPICGVEAHVIRDL  
 TorA/E.c. : LYDKNFLANVCVGFEEFLPYLLGE-KDGPCKDAAWAEKLSGIDAETIRGL  
 DorA/R.s. : LHDKDFLENCCTTGFDLFAAYLTGE-SDGTPKTAEWAAEICGLPAEQIREL

TorA/P.p. : ARGLVKNRTMIMFGWAVQRQHQGEQPYWMGAVLASMLGQIGLPGGGISYS  
 TorA/S.m. : AKTLVKGRTOFMMGWCIQRQHQGEQPYWMAAVLATMIGQIGLPGGGISYG  
 TorA/E.c. : ARQMAANRTQITAGWCVQRMQHGEQWAWMIVVLAAMLGQIGLPGGGFGEF  
 DorA/R.s. : ARSFVAGRTMLAAGWSTQRMHHGEQAHWMLVTLASMIGQIGLPGGGFGLS

TorA/P.p. : HFYSGVGLPFSTAAGPGGFPRNVDEGQQPIWNNNDLK---ATVRQFRSQD  
 TorA/S.m. : HHYSSIGVPSSGAAAPGAFPRNLDENQKPLFDSSDFKGASSTIPVARWID  
 TorA/E.c. : WHYNGAGTPGRKGVILSGFSGSTS--IPPVHDNSDYKGYSSSTIPIARFID  
 DorA/R.s. : YHYSNGGSPTS DGPALGGISDGGKAVEGAAWLSESGA---TSIPCARVVD

TorA/P.p. : GLMRSSN  
 TorA/S.m. : AILEPGKTIDANG  
 TorA/E.c. : AILEPGKVINWNG  
 DorA/R.s. : MLLNPGGEFQFNG

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Figure 8

TorA/S.t. : -----MKQVSPQFEARNDFDIFRDLCRRFNREAAFTGLDEMGLK  
 TorA/E.c. : ---RGI IAMKQVVPQFEARNDFDIFRELCCRFRNREEAFTGLDEMGLK  
 DorA/R.s. : ---RAILAMKKVVDPLYEARS DYDIFAALAE RLKGAEFTGRDEMGLS  
 TorA/S.m. : ---RGILAMQKMVEPLFDSLSDFEIFTRFAAVLGKEKEYTRNMGEMEWLE

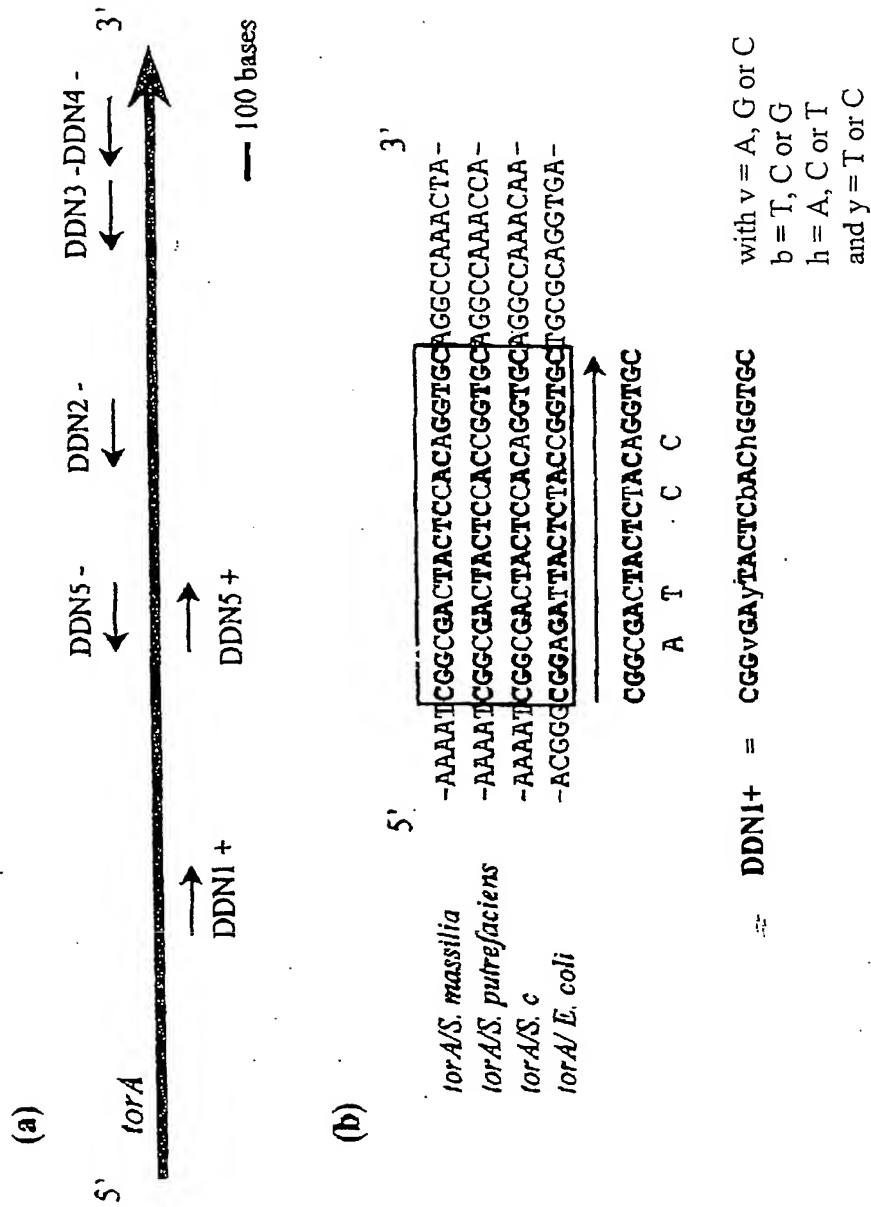
TorA/S.t. : RIWQEGSQQGGKGRGIHLPIFEVFWNQOEYIEFDHPQ--MFVRHQAFREDP  
 TorA/E.c. : RIWQEGVQQGKGRGVHLPADFDFWNNKEYVEFDHPQ--MFVRHQAFREDP  
 DorA/R.s. : SFYEAAVKQAEFKNVAMPSFEDFWSEG-IVEFPITEGANFVRYADFREDF  
 TorA/S.m. : TLYNECKAANAGK-FEMPDEFATFWKQG-YVHFGDGE--VWTRHADFRNDP

TorA/S.t. : DLEPLGTSPGLIEIYSKTIADMQYDDGQGHPMWFEXIERSHGGPGSQRWP  
 TorA/E.c. : DLEPLCTSPGLIEIYSKTIADMNYDDCQGHPMWFEXIERSHGGPGSQKYP  
 DorA/R.s. : LFNPLGTSPGLIEIYSKNIKMGYDDCPAHPTWMEPAER-LGGAG-AKYP  
 TorA/S.m. : EINPLGTSPGLIEIFSRKIDQFGYDDCKGHPTWMEKTERS HGGPGSDKHP

TorA/S.t. : LHLQSVHPDFRLHSQLLRV-----  
 TorA/E.c. : LHLQSVHPDFRLHSQ LCESETLRH----  
 DorA/R.s. : LHVVASHPKSR LHSQ LNGTSLRD-----  
 TorA/S.m. : IWLQSCHPDKRLHSQMCE SREYRE----

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Figure 9



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Figure 10

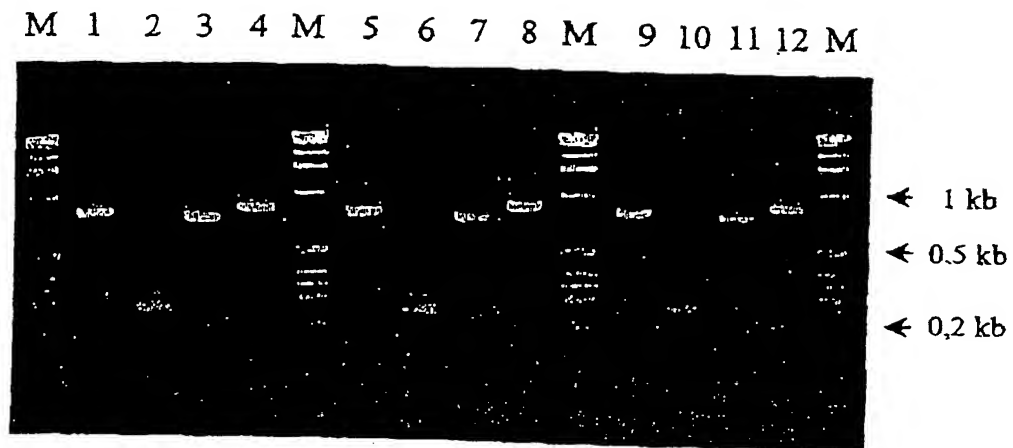
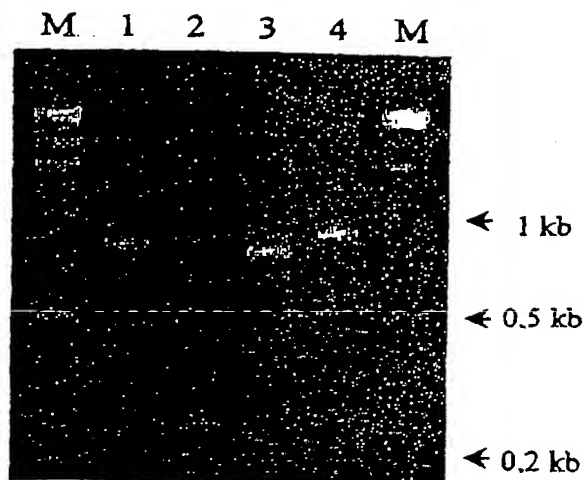


Figure 11



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Figure 12

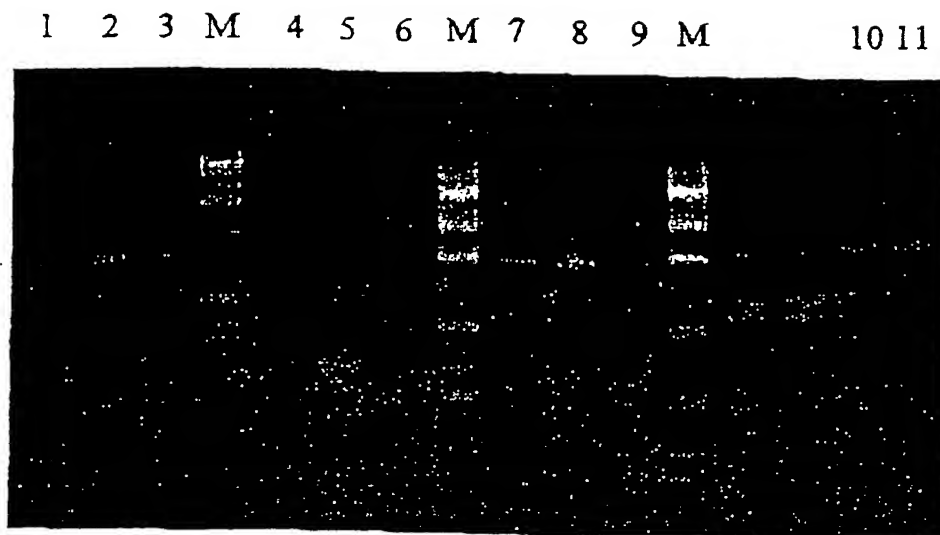
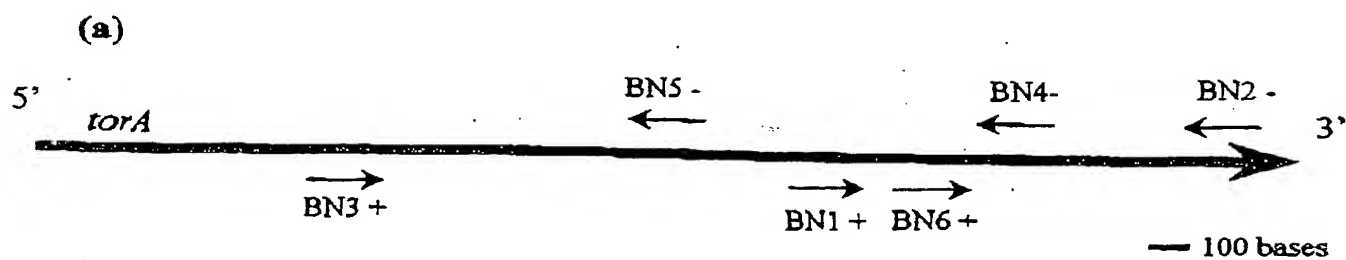
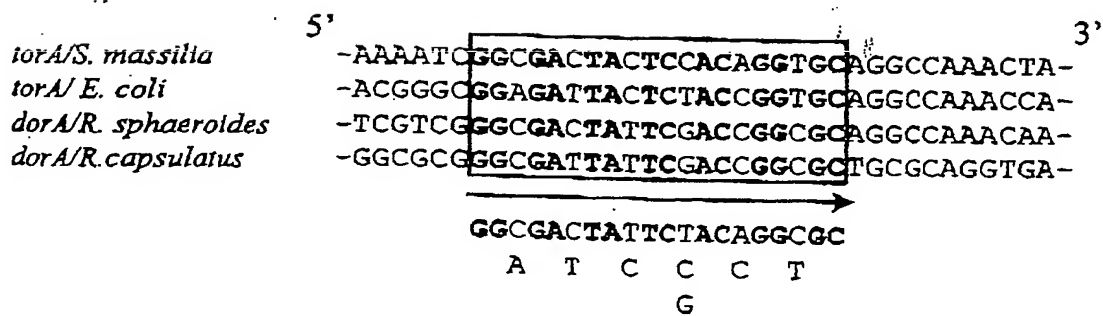


Figure 13



(b)



BN3+ = GGmGAyTAyTCbACmGGyGC

with m = A or C  
and y = T or C  
and b = T, C or G

Figure 14

TorC/S.m. :	-----MKWLTNLMRTLNKPTKALTIGAVSISAFINGIIFNGGENTALENTNTAFPCISCHSMESKPYOELQETVHWSNBFGVRATCPDCHVPHNW	: 90
TorC/E.c. :	-----MRKLMNLRPSARWSVLVAIGIVIGIALIVLPHVGIKVTSTTEFCVCHSMQE-VTEYKQSVHFQNASGVRAECHDCHIPPDI	: 86
DorC/R.s. :	MGRSCGQASEAKVIGRIWKAFWRPSTKMGVLGVLVTGGIAGVNGEHHYVVEKTTTTEFCISCHSMRDNNYEEYKTTIHVQNTSGVRASCADCHVPKSG	: 100
	BC1+ →	
TorC/S.m. :	SRKJARKEASHDVG-WLFTVNTPEKFEAKALEMASHEWKRFDRONS LACKNCHN-YN SMKWEAM-SPLAQOMKRAEIDQSCIDCHKGI-AHHLPE	: 186
TorC/E.c. :	PGMVKRKLEASNDIYQTFIAHSIDTPEKFEAKRAELAEEREMARKENNSATCRSCHN-YDANDHAKQ-HPEAARQMKVAARDNQSCIDCHKGI-AHQLPD	: 183
DorC/R.s. :	MKLYRAKLLAAKOLWG-EIRGTIDTREKFEAHRLEMAETVMADMKANDSATCRTC HS- FEANDFAHQ-KPEASKQHQQA MNEGGTCIDCHKGI-AHKMPD	: 196
	BC2+ →	
TorC/S.m. :	MGTARAPELIAEVCAGVSSVETN-QTYYSALTWPLFFTDKGDVE-----ACTLNVATKVKVLETCGKRIKIGIDGWRKIGAGR----VIYMDFGVNILSAQ	: 278
TorC/E.c. :	MSSGFRKQDDVR-ASANDSG-----OTLYSIDIRPIYAA-KGDKE-----ASGSLLPASEVKV LKRDGDMLOIETGWT--ESAGRQR-VLTQFPGRKIFVAS	: 272
DorC/R.s. :	MASGYRALFSKLEKASQSLKPRKGETLVP LRTTEAYLE-KPSGEKAKADGRLLANTRMQVVDVTGDMVQVAVKGNQO-EGAER----VIYEKQGRKIFNAA	: 291
	BC2- →	
TorC/S.m. :	LTKDAEETGGV IQTFEKED---PMTGLKWRQIEAQIWTDXDYLLTELOPLNGYARDTFRSSCSVCHTQPDFAHFDANTWPGMFGMIAFVNMDDQTOAL	: 375
TorC/E.c. :	IRGDVQQQ---VKTLEKTVV---ADTNTEHSLAQATAMWKGDHNDIKPIWAYADSLYNGTCNQCHGAPETAHFDANGWICTLNGMIGFTSLDKREERT	: 366
DorC/R.s. :	LAPAAATGS---VVPGASND---PDTEQTWTDVSLTANVRNRLTGDQEAALWQYGRQMYNGACGCHCHVLPBFEHFLANQWICTLNMKSRAPLDDEQERL	: 385
	BC3- →	
TorC/S.m. :	VQKYLQEHSSTFVKKEH-----	: 392
TorC/E.c. :	LLKYLQMNASDTAGRAHGDKKEK-----	: 390
DorC/R.s. :	VQRYVQMHAKDVEPEGAB-----	: 404

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Figure 15

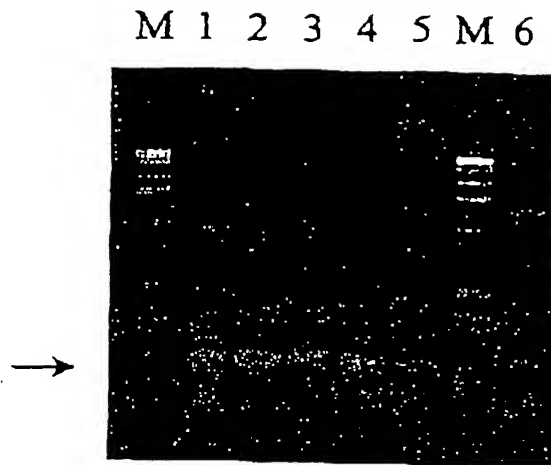


Figure 16

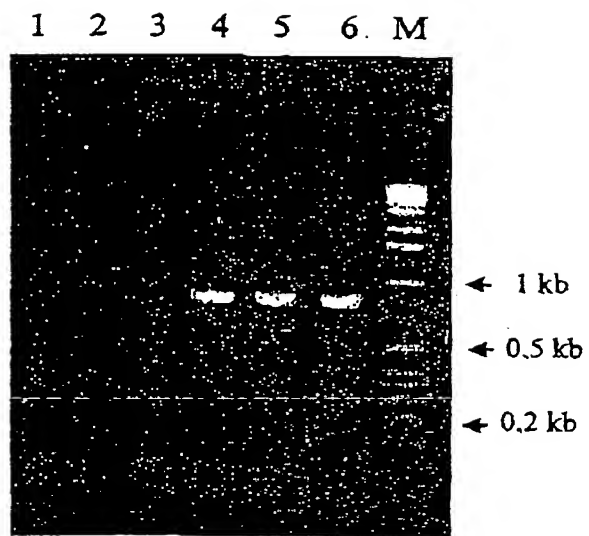


Figure 17

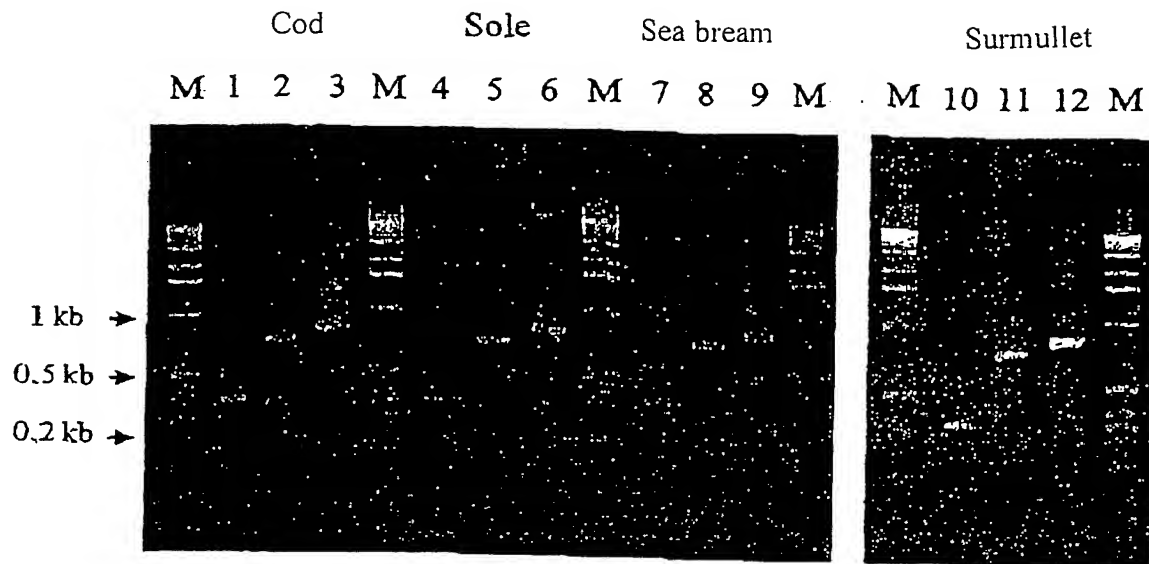
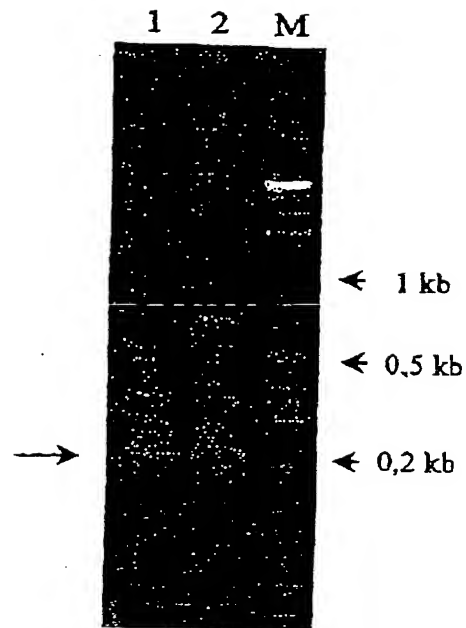


Figure 18



[illegible]

**Figure 19 (cont. 1)**

[illegible]

Figure 19 (cont. 2)

torA/p.p.	1520	1540	1560	1580	1600	1620
torA/s.p.	TTGATTATACATGACACCACTGCTGCTTTTCGCGATATTTACCTGCTTTGACCAATTTGAGCTACATATGCTTCACTAGCGGTATTTAGCGATGCAAT					
torA/s.m.	TTGATGTGAACTGGACAGCACTTGTGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.c	TCGATGTGAACTGGACAGCACTTGTGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.t.	TTGATGTGAACTGGACAGCACTTGTGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/p.p.	1640	1660	1680	1700	1720	1740
torA/s.p.	AAGCTAATTGATCGCTTTATCAATCAAAACAGACTTTTCAGATATTTACTGATTTAACCGACGCTTTGGGAA-					
torA/s.m.	AAAAATGCTGAGGCTTTGTTTGAAGCTTTGCTGACTTTGAGATTTTACCTGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.c	AAAAATGCTGAGGCTTTGTTTGAAGCTTTGCTGACTTTGAGATTTTACCTGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.t.	AAAAATGCTGAGGCTTTGTTTGAAGCTTTGCTGACTTTGAGATTTTACCTGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/p.p.	1760	1780	1800	1820	1840	1860
torA/s.p.	CTATACCGAGTGTAAAGCCGCTTAACGCGGTAAGTATGAGATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.m.	CTATACCGAGTGTAAAGCCGCTTAACGCGGTAAGTATGAGATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.c	CTATACCGAGTGTAAAGCCGCTTAACGCGGTAAGTATGAGATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.t.	CTATACCGAGTGTAAAGCCGCTTAACGCGGTAAGTATGAGATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/p.p.	1880	1900	1920	1940	1960	1980
torA/s.p.	ACGATCCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.m.	ACGATCCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.c	ACGATCCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.t.	ACGATCCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/p.p.	2000	2020	2040	2060	2080	2100
torA/s.p.	AGCATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.m.	AGCATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.c	AGCATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.t.	AGCATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/p.p.	2120	2140	2160	2180	2200	2220
torA/s.p.	AGCATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.m.	AGCATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.c	AGCATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.t.	AGCATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/p.p.	2240	2260	2280	2300	2320	2340
torA/s.p.	CGAATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.m.	CGAATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.c	CGAATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					
torA/s.t.	CGAATGCTGAAATCAATCCACTAGGCAAGGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGATATGCTTTCGCGAT					

Figure 19 (cont. 3)

2260	2280	2300	2320	2340	2360
toRA/p.p. :					
toRA/s.p. :					
toRA/s.m. :					
toRA/s.c. :					
toRA/s.t. :					
2380	2400	2420	2440	2460	2480
toRA/p.p. :					
toRA/s.p. :					
toRA/s.m. :					
toRA/s.c. :					
toRA/s.t. :					